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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,241	11/26/2003	Stephen C. Olson	02243-039001	6105
7590	08/04/2005		EXAMINER	
Phyllis K. Kristal Fish & Richardson P.C. 1425 K Street, N.W. Washington, DC 20005-3500			PAHNG, JASON Y	
			ART UNIT	PAPER NUMBER
			3725	

DATE MAILED: 08/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/721,241	<b>Applicant(s)</b> OLSON, STEPHEN C.	
	<b>Examiner</b> Jason Y. Pahng	<b>Art Unit</b> 3725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 July 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) 1-15 and 30-48 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 16-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>4/23/2004</u> .   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election without traverse of Group IB, claims 16-29, in the reply filed on July 13, 2005 is acknowledged.

### ***Claim Objections***

Claim 19 is objected to because of the following informalities: It appears that claim 19 should depend from claim 16. Appropriate correction is required. For the purposes of this examination, claim 19 is assumed to depend from claim 16 instead of claim 1.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 25 and 26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. An angular relationship between the fluid energy mill and a horizontal must be defined first before a relationship between the feed inlet and horizontal is defined. Also, an angular relationship between the feed inlet and the fluid energy mill must be defined first.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 16, 19, 22, 25-27, and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Trost (US 3,229,918).

With regard to claims 16 and 22, Trost discloses a fluid energy mill including:

1. a one-piece manifold (11);
2. a grinding chamber (44);
3. a feed inlet including a feed gas inlet (78) and a material funnel (74);
4. a gas inlet (79));
5. an outlet (35) formed in the rear face; and
6. a cover (87).

With regard to claim 19, Trost discloses a cycloid-shaped grinding chamber (44, Figure 1).

With regard to claim 20, Trost discloses a protective pocket (56).

With regard to claim 21, Trost discloses a barrier (55) at a region where the material enters the grinding chamber.

With regard to claims 25 and 26, the fluid energy mill of Trost is capable of being tilted 30 degrees or more to a horizontal. Note that claims 25 and 26 are not process claims. Claims 25 and 26 are apparatus claims.

With regard to claim 27, Trost discloses a feed inlet (46) positioned tangent to a second radius (8 o'clock direction, Figure 1) larger than a first radius (6 o'clock direction, Figure 1).

With regard to claim 29, Trost discloses an outlet (35) positioned near the center.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Trost (US 3,229,918) in view of Coombe et al. (US 3,840,188). Trost discloses a non-circular seal (87), but does not disclose a groove. In a closely related art, Coombe discloses a fluid energy mill with a groove for a seal in order to improve sealing. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to provide Trost with a groove for a seal in order to improve sealing, as taught by Coombe.

Claims 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Trost (US 3,229,918) in view of Fay (US 3,559,895).

Claim 23 calls for an intersection of the feed gas inlet and the material funnel to form an elliptical hole. In a closely related art, Fay discloses a fluid energy mill with an elliptical hole (Figure 11) in order to accommodate a slanted hopper (77). Therefore, it

would have been obvious to one skilled in the art at the time the invention was made to provide Trost with an elliptical hole in order to accommodate a slanted hopper, as taught by Fay.

Claim 24 calls for a venturi. Fay discloses a venturi (76, Figure 11) in order to provide a diverging nozzle. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to provide Trost with a venturi in order to provide a diverging nozzle, as taught by Fay.

Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Trost (US 3,229,918) in view of Andrews (US 2,032,827). Claim 28 calls for a gas to enter the grinding chamber tangent to a gas inlet radius extending from the center, the gas inlet radius being smaller than the first radius. Andrews discloses a gas entering (25) a grinding chamber tangent to a gas inlet radius extending from the center, the gas inlet radius being smaller than a first radius (Figure 1) in order to provide both a forward tangential component and inward component (page 5, lines 25-35) to create high velocity vortex. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to provide Trost with a gas entering a grinding chamber tangent to a gas inlet radius extending from the center, the gas inlet radius being smaller than a first radius, in order to provide both a forward tangential component and inward component to create high velocity vortex, as taught by Andrews.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Y. Pahng whose telephone number is 571 272 4522. The examiner can normally be reached on 9:00 AM - 7:00 PM, Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derris Banks can be reached on 571 272 4419. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JYP



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